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LETTER FROM WEST VIRGINIA

Chemical Valley

The coal industry, the politicians, and the big spill.

by Evan Osnos

On the morning of Thursday, January 9, 2014, the people of Charleston, West Virginia, awoke to a strange tang in the air off the Elk River. It smelled like licorice. The occasional odor is part of life in Charleston, the state capital, which lies in an industrial area that takes flinty pride in the nickname Chemical Valley. In the nineteenth century, natural brine springs made the region one of America's largest producers of salt. The saltworks gave rise to an industry that manufactured gunpowder, antifreeze, Agent Orange, and other "chemical magic," as *The Saturday Evening Post* put it, in 1943. The image endured. Today, the Chemical Valley Roller Girls compete in Roller Derby events with a logo of a woman in fishnet stockings and a gas mask. After decades of slow decline, the local industry has revived in recent years, owing to the boom in cheap natural gas, which has made America one of the world's most inexpensive places to make chemicals.

At 8:16 A.M., a resident called the state Department of Environmental Protection and said that something in the air was, in the operator's words, "coating his wife's throat." Downtown, the mayor, Danny Jones, smelled it and thought, Well, it's just a chemical in the air. It'll move. A few minutes passed. "I stuck my mouth up to a water fountain and took a big drink, and I thought, We're in trouble," he recalls. People were calling 911, and the state sent out two inspectors. Eventually, they reached a chemical-storage facility run by Freedom Industries, a "tank farm," with seventeen white metal pillbox-shaped containers clustered on a bluff above the Elk River.

The staff initially said that there was nothing out of the ordinary, but, when the inspectors asked to look around, a company executive, Dennis Farrell, told them that he had a problem at Tank No. 396, a forty-eight-thousand-gallon container of industrial chemicals. At the foot of the tank, the inspectors found a shallow open-air lake of an oily substance, gurgling like a mountain spring. When hazardous-material crews arrived, they followed a liquid trail under a concrete wall, into the bushes, and down a slope, where it disappeared beneath ice on the river.

Freedom Industries was obligated to report the spill to a state hot line. The operator, who

identified herself as Laverne, asked what was leaking; the caller, a staff member named Bob Reynolds, said, "Uh, MCHM."

"MCHM?" Laverne asked.

"Right," he said, and offered the scientific name.

Laverne paused and said, "Say again?"

MCHM—4-methylcyclohexane methanol—is part of a chemical bath that the mining industry uses to wash clay and rock from coal before it is burned. There are more than eighty thousand chemicals available for use in America, but, unless they are expected to be consumed, their effects on humans are not often tested, a principle known in the industry as "innocent until proven guilty." MCHM was largely a mystery to the officials who now confronted the task of containing it. But they knew that the site posed an immediate problem: it was a mile upriver from the largest water-treatment plant in West Virginia. The plant served sixteen per cent of the state's population, some three hundred thousand people—a figure that had risen in the past decade, because coal mining has reduced the availability and quality of other water sources, prompting West Virginians to board up their wells and tap into the public system.

This was West Virginia's fifth major industrial accident in eight years. Most accidents unfold deep in the mountains that contain the state's natural resources. In this case, the leaders of the state were less than three miles away—near enough to smell it. The spill occurred on the second day of the annual legislative session, when lawmakers were in the State Capitol, a handsome limestone edifice with a gilded dome and landscaped grounds on the north bank of the Kanawha River.

The spill struck a state in the throes of one of America's most thorough political transformations. Once a Democratic stronghold, West Virginia has moved so far to the right that, in 2012, President Obama lost all fifty-five counties, a first for a Presidential candidate of either major party. In the Democratic Presidential primary, a challenger had won forty-one per cent of the vote—impressive in part because the candidate, Keith Judd, is serving seventeen and a half years in a federal prison for extortion.

The state has become a standard-bearer for pro-business, limited-government conservatism. The day before the chemical spill, the governor, Earl Ray Tomblin, delivered his State of the State address, criticizing federal environmental regulators and vowing, "I will never back down from the E.P.A., because of its misguided policies on coal." Tomblin, a conservative Democrat elected in 2011, cut corporate taxes and denounced the federal government for overstepping its authority. To balance the budget, he tapped other government funds and called for broad cuts, including reducing agency spending by seventy million dollars. For the second consecutive year, West Virginia's Department of Environmental Protection would take a 7.5-per-cent cut in state funds, dropping to its lowest level since 2008.

At first, Freedom Industries estimated the leak to be as small as twenty-five hundred gallons, about sixty barrels. Within days, the estimate had tripled. Eventually, the company raised it to

ten thousand gallons, and reported that a second chemical, known as PPH, had leaked as well. At 6 P.M., the Governor appeared on television and issued a warning unprecedented in Chemical Valley: he told three hundred thousand people that their tap water was not safe for "drinking, cooking, washing, or bathing." It was one of the most serious incidents of chemical contamination of drinking water in American history.

By this time, people had been drinking the water all day. Authorities urged the public to watch for symptoms of exposure, including rashes, nausea, vomiting, and wheezing. Just after midnight, President Obama declared a federal emergency. He dispatched FEMA and sent in the National Guard to deliver truckloads of bottled water.

The struggle over the costs and the spoils of industrial production is as much a part of West Virginians' self-image as the coal miner on the state flag. The historian John Alexander Williams, a retired professor at Appalachian State University, said, "If West Virginia has one enduring theme, it was in the words of those first explorers who described it as a 'pleasing, tho' dreadful' land." In the Battle of Blair Mountain, in 1921, more than ten thousand miners confronted police and federal troops backed by machine guns and biplanes. It was the largest insurrection since the Civil War and contributed to Franklin Roosevelt's efforts, more than a decade later, to protect collective bargaining. When the Great Depression cut West Virginia coal production by forty per cent, Roosevelt pushed relief programs into the mountains and enshrined Democratic control of the state. The Party had so many patronage jobs at its command that U.S. Senator Matthew M. Neely complained that job seekers were "following me to my bathroom."

When I finished college, in 1999, I got a job as a photographer at a newspaper in West Virginia, the Clarksburg *Exponent Telegram*. Clarksburg (pop. 16,400) is a small city in the northern part of the state, with an Art Deco courthouse on Main Street, where a billboard once hung that said "You have a right to be proud!" I rented a roomy apartment in a hundred-year-old building with large windows and a view of downtown. Clarksburg had never been rich, but workers in the local glass factories could afford to buy a house and a car and raise a family. The standard of living had risen in the three decades after the Second World War, as it had in much of America, when the national economy doubled in size and the earnings of the average worker doubled with it. By 1957, the local government was creating so many parks and sewers and roads that the National Municipal League named Clarksburg an "All-America City," and the honor still appeared on signs around town.

Once or twice a generation, Americans rediscover Appalachia. The hillbilly caricature—Li'l Abner to Honey Boo Boo to "Buckwild," a reality show about West Virginia teen-agers, which MTV broadcast last year (with subtitles)—deflects attention from the efforts to reduce poverty in West Virginia. The social critic Michael Harrington, who focussed prominently on Appalachia in his 1962 book, "The Other America," described poverty as a "separate culture, another nation, with its own way of life." Half a century later, the inequity endures, with one difference: the economics and the politics of West Virginia have never been more like those in the rest of the country. When the historian Ronald Eller, of the University of Kentucky, studied the history of the region since 1945, he concluded that "Appalachia was not different from the rest of America; it was in fact a mirror of what the nation was becoming."

West Virginia ranks among the nation's worst states when it comes to smoking, obesity, disabilities, and prescription-drug abuse; it trails much of the nation in the rate of college graduation. So many young people leave in search of work that West Virginians joke that kids learn the three R's: reading, 'riting, and Route 77—the road out. In McDowell County, at the southern end of the state, the average man lives to be sixty-four—a level on a par with Yemen. Over the border in Virginia, men in Fairfax County live eighteen years longer.

In the modern era of inequality, in which the share of income held by the top one per cent is the largest it has been since 1928, the inequality is widening in West Virginia. As the southern coalfields continue to empty out, the eastern panhandle is becoming a growing bedroom community for Washington, D.C. More than half of West Virginians' income growth in the past three decades has gone to the state's top one per cent.

In Chemical Valley, the relationship between industries and neighbors has fluctuated. Historically, chemical workers often earned more than twice the state's average income. Maya Nye, the president of a citizens' group called People Concerned About Chemical Safety, grew up a mile from a plant run by Union Carbide, where her father worked, and she was proud to be one of "the Carbide kids." "It put food on my table," she said. "There were no other jobs here if you didn't work for the chemical plant." In school, kids learned from a cartoon turtle how to respond if the plant ever set off the alarm for a vapor leak. "His name was Wally Wise Guy, and he would teach you how to shelter in place," she said. "He taught you to 'retreat inside your shell.'"

In December, 1984, a Union Carbide pesticide plant in the Indian city of Bhopal leaked a cloud of toxic gas known as MIC, or methyl isocyanate, killing nearly four thousand people and permanently injuring more than forty-nine hundred. The West Virginia Union Carbide was Bhopal's sister plant, the only facility in America that still produced and stored large quantities of MIC. In August, 2008, after the plant had been acquired by Bayer CropScience, undertrained workers mishandled the re-start of a sensitive production unit, triggering an explosion that killed two employees. Congressional investigators later found that the explosion at the plant "came dangerously close" to hitting a tank of the chemical that had leaked in Bhopal; if it had, they wrote, the consequences "could have eclipsed the 1984 disaster in India."

That incident and others galvanized West Virginia's environmental community to confront rising risks to public health. Decades earlier, in response to environmental disasters such as the burning Cuyahoga River, in Ohio, Congress had passed the 1972 Clean Water Act, which gave regulators the power to punish offenders. Two years later, it created a second landmark law: the Safe Drinking Water Act, which sets limits on contaminants in tap water. Conditions improved—the Kanawha River in Charleston was transformed—but progress eventually stalled. By the late nineties, lax enforcement and radical new forms of mining were undercutting protections in West Virginia. Today, the process known as mountaintop-removal mining has buried more than a thousand miles of streams across Appalachia. In 2010, the journal *Science* published a study of seventy-eight West Virginia streams near mountaintop-removal mines, which found that nearly all of them had elevated levels of selenium—a by-product of mining that has caused deformities in fish. In 2009, four environmental organizations petitioned the federal government to take over enforcement of parts of the Clean Water Act in West Virginia; they described the state's

regulatory system as approaching a "nearly complete breakdown." Nothing came of the request.

After the spill and the ban on water this past January, schools, restaurants, and businesses shut down. The National Guard directed its resources toward hospitals and nursing homes. Candi Shriver, a mother of two, who works as an emergency medical technician and sells Avon products, told me, "I shouldn't be surprised, but I was surprised, or outraged, by the people who were fighting in the stores. People were getting in knock-down drag-outs over the last case of water." Her husband, Josh, improvised. He is an I.T. consultant who can take apart his Harley and put it back together again. They'd met on Plenty of Fish, the dating Web site, and had much in common, although she'd voted for Barack Obama (Josh had switched his registration from Democrat to Republican in 2008). When the water ban went into effect, Josh drove his truck eighty miles south, to Williamson. At a Big Lots superstore, he asked for a pallet of bottled water. "The whole thing?" the clerk inquired. Shriver paid a dollar a gallon for two hundred and seventy-five gallons and hauled it home for his family and his neighbors.

As the water ban continued, affluent residents rented apartments in unaffected towns, in order to bathe their kids and wash clothes. The less fortunate put out buckets and hoped for rain. In the first three days, more than two hundred people showed up at emergency rooms with rashes, nausea, and other complaints. A dozen were admitted; none were seriously ill. Meanwhile, the contaminated water from Charleston had emptied into the Ohio River, and the Greater Cincinnati Water Works, which served more than a million people, closed its intakes and shifted to emergency reserves until the chemicals had passed.

Dr. Rahul Gupta, the head of the Kanawha-Charleston Health Department, was tracking the spill's effects from his office. At forty-three, Gupta has a boyish face, and a trace of silver in his hair. The son of an Indian diplomat, he grew up partly in Maryland, and graduated from the University of Delhi before returning to America. He moved to Charleston with his wife and children in 2009. He approached the job with an entrepreneurial bent: to fight obesity and diabetes, he had created a mobile app that plotted restaurants by G.P.S., and allowed users to compare menus and calorie counts.

Public officials urged Gupta to permit restaurants and other facilities to reopen, but he was hesitant. "I have to be honest and transparent with the public," he said. "I didn't know enough about the chemical. Obviously, you don't want to outrage the population about something you don't know, but I wanted more data." The loss to businesses was estimated to be nineteen million dollars a day, but, before shops could reopen, Gupta needed to send in inspectors. "I had officials come to me and say, 'Use the honor system.' "That struck Gupta as profoundly misguided. "The honor system is bad—it's why a local health department exists," he said. "I had to put my foot down. The beauty of the system is that we have autonomous local boards of health."

On January 12th, the fourth day without water, Governor Tomblin held a press conference to say that the "numbers look good" and "we're seeing light at the end of the tunnel." Though the water in many homes still smelled of licorice, state officials told the public that it posed no obvious health risk. But, during the next four days, Gupta recorded a rising number of emergency-room and doctor's visits for skin rashes, eye irritation, nausea, vomiting, anxiety, and migraines. He said, "As a scientist, I can't prove cause and effect, but it was a matter of fact: whether it was

introducing a new chemical into the water, and people were having a hypersensitive-type reaction, or it was the odor triggering nausea, migraines, and asthma attacks, it was very clear that something was going on." The public was losing trust in official statements. "People who followed every guideline to the T were still ending up with rashes or eye irritation, and that made them mad."

The health effects were still in question. The company that made MCHM, Eastman Chemical, of Tennessee, had tested it on laboratory animals and given it a U.S. Occupational Safety and Health Administration rating of "hazardous." The long-term effects on humans were uncertain, but the U.S. Centers for Disease Control calculated that the material was safe to consume below a level of one part per million. On January 15th, two days after Tomblin began lifting the ban, the C.D.C., "out of an abundance of caution," issued an advisory to pregnant women to avoid the water.

The public recoiled. If the water wasn't safe for pregnant women, why was it safe for infants or toddlers? What about pregnant women who had been told that it was safe and resumed drinking it? A few hours before the announcement, Stephanie Gale, a human-resources consultant who lives a mile from the spill, had gone to the doctor and heard her unborn child's heartbeat for the first time. "I've had people say, 'Well, pregnant women should've just known not to drink the water,' "she said. "There are a lot of things that you have to think about as a pregnant woman that you don't have to think about as a not-pregnant woman, and drinking the water shouldn't be one of them." Three weeks later, the C.D.C. lifted its advisory to pregnant women, saying that the water had been safe all along.

Day by day, schools that had been declared safe were running into problems. Plumbing systems differed, so one school could be free of MCHM while another still had traces. Governor Tomblin stopped urging people to drink the water and adopted a legalistic position: "I'm not going to say absolutely, one hundred per cent, that everything is safe. But what I can say is, if you do not feel comfortable don't use it." He added, "It's your decision." Kitchen workers who encountered steam were especially vulnerable to the effects. On February 5th, two schools shut down after teachers and kids complained of dizziness and nausea. "The following day, we had three more schools close," Gupta said, "and we had up to fourteen schools that complained, but the day ran out, so the kids were let go." At the end of February, he told me, "We're getting complaints from schools almost every day."

For West Virginians, the battle to obtain some of the basic elements of government service—potable water, safe schools, public-health advice—was disorienting. Josh Shriver said, "They didn't know exactly what it was, they didn't know how much of it had leaked, and they didn't know how long it had been leaking." At one point, Candi Shriver, hauling water in from outside to flush the toilet, said to her husband, "It's like we're living in a Third World country."

In 1948, West Virginia had a hundred and twenty-six thousand coal miners. By 2011, four-fifths of those jobs were gone. The most accessible reserves had been mined, and machines were cutting demand for workers underground. But King Coal remained a singular political force. The first time that John D. (Jay) Rockefeller IV, a Democrat and the great-grandson of the founder of Standard Oil, ran for governor of West Virginia, in 1972, he said, "Strip mining is tearing up the

beauty of our state" and "is not a good economic future." Miners mobilized against him, heckling him at rallies, and Rockefeller lost. When he ran again, four years later, he had become a coal-industry ally, and went on to serve as governor and then five terms in the U.S. Senate.

By the turn of the twenty-first century, the mine workers' union was too weak to deliver Democratic votes, Walmart was the largest employer in West Virginia, and the state was poised for one of America's most dramatic political transformations. In 1999, Karl Rove, the Bush campaign strategist, added West Virginia to a list of long-shot states that he suspected Republicans could win. G.O.P. Presidential campaigns had all but ignored West Virginia since Nixon, Eisenhower's running mate, visited in 1956, and the state still had nearly twice as many registered Democrats as Republicans, but Rove saw an opening. In his 2010 memoir, "Courage and Consequence," he recalled, "The state's coal industry was under attack from the Clinton administration. Many Democratic voters were pro-life, pro-prayer, and pro-gun, even if they had voted Democratic for decades, and it seemed Bush would be a better fit than the elitist Al Gore."

The Bush-Cheney campaign opened eighteen offices across West Virginia and barraged the state's small media market with ads. To raise money, Rove recruited the coal tycoon James H. (Buck) Harless, who had looked at Gore's agenda and decided, "I needed to fight much harder than I ever had." The coal industry tripled its campaign donations from four years earlier. The campaign also enlisted Charles Kimbler, an unemployed official from the miners' union, to wear his miner's helmet and introduce Bush at rallies with the line "The Democrat Administration shut my mine down, and I lost my job." Bush became the first non-incumbent Republican Presidential candidate to win the state since Herbert Hoover, in 1928. (If Al Gore had carried West Virginia, he would have won the Presidency.)

Bush's victory was a milestone; the state that once idolized Franklin Roosevelt and John F. Kennedy was dedicating itself to corporate liberty and freedom from oversight. For years, the state had greeted visitors with billboards that said "Wild Wonderful West Virginia." In 2006, it adopted a new slogan: "Open for Business."

In West Virginia today, the state Republican Party frames the regulation of heavy industry as a matter of cultural and existential survival. Last year, the Party urged supporters to "join this battle against the liberal Democrats of D.C.," and declared, "Obama's foot soldiers seek to destroy our very way of life for the sake of an agenda that guts our economy."

As the water ban was lifted, attention shifted to determining what had happened, who was responsible, and how to prevent it from happening again. Freedom Industries did not hold up well under scrutiny. It had failed to file mandatory leak-prevention plans with the Department of Environmental Protection. State inspectors made occasional visits, as in April, 2010, when a neighbor complained of a licorice smell that "leaves a bad taste in your mouth," but the plant was never fined.

Freedom Industries was founded in 1992 by Carl Lemley Kennedy II, a local businessman who had owned real estate and restaurants. In 1987, he had pleaded guilty to selling cocaine as part of an operation that brought down Charleston's mayor at the time, Mike Roark. The Mayor pleaded guilty to cocaine possession and went to jail. Kennedy got probation. He and some partners

converted a former Pennzoil facility into Freedom Industries, and by 2005 the business was valued, in court papers, at \$13.5 million. That year, after federal prosecutors accused Kennedy of tax evasion and pocketing money withheld from workers' paychecks, he became an informant. He made controlled cocaine buys and wore a wire to record a former business associate, a septictank cleaner who told his drivers to pour sewage down the drain. For his coöperation, Kennedy served less than two years.

By 2009, Freedom had forty-five employees, but it needed help from the government: a buildup of silt in the Elk River was making it difficult for barges to reach the tanks. The U.S. Army Corps of Engineers used four hundred thousand dollars in federal stimulus funds to dredge the river, and Freedom survived. In December, 2013, Freedom was acquired by Chemstream Holdings, which is owned by J. Clifford Forrest, the founder and president of a Pennsylvania-based coal company named Rosebud Mining. Eight days after the spill, Freedom, facing dozens of lawsuits, filed for bankruptcy.

The responsibility for regulating Freedom Industries fell to the state's Department of Environmental Protection, which during the past decade has been urged to scale back its enforcement. "It's not subtle," Pam Nixon, who retired this year after fifteen years as a senior department official, told me. She recalled a staff meeting in which Joe Manchin, the governor from 2005 to 2010, "said that when the industries see the D.E.P. coming onto their property he wanted them to feel comfortable." Manchin, a Democrat, had prospered as a middleman who helped coal mines sell to power plants and other users. Once in office, he repeatedly advised the department to shift its emphasis from enforcement to "compliance assistance." By that, Nixon said, he meant, "If there was a problem, work to make sure that the company can continue to operate. . . . He didn't want us to come down heavy-handedly." Nixon, who served as the department's Environmental Advocate, expressed her concerns about gaps in enforcement to the head of the department, a Manchin appointee named Randy Huffman. "He said, 'Remember how this administration feels about these industries.'"

In 2008, the Charleston *Gazette* discovered that in a nearly five-year period coal companies had self-reported around twenty-five thousand violations of the Clean Water Act, but the D.E.P. had not reviewed the reports or issued a fine. The following year, federal investigators from the Office of Surface Mining wrote that West Virginia had become so lax in its enforcement of coalmining pollution regulations that "the consequences for violating the law, even when the violations are intentional, willful and blatant, are not significant enough to be a deterrent." In 2010, Manchin left the Governor's Mansion and ran for the U.S. Senate. He promised to protect the state from environmentalists' "attempts to destroy our coal industry and way of life in West Virginia." The American Chemistry Council, the leading industry group, spent two hundred and twenty-five thousand dollars on advertisements praising Manchin as the "Senator for Our Future." In a campaign ad, Manchin fired a rifle into a copy of a climate-change bill. On his Senate financial disclosures, he has reported income of more than three million dollars between 2009 and 2012 from Enersystems, a coal brokerage that he owned. (It is now run by his son.)

At the Department of Environmental Protection, the commitment to "compliance assistance" endures. An inspector told me that senior officials often question the field staff's attempts to penalize companies that violate the law. He said that the resistance was "a slap in the face" to

professional inspectors. If they persisted in trying to issue a violation, instead of a warning, they faced added paperwork. "That process of enforcement just takes a toll on you," he said. "It should be easier."

When I spoke to Randy Huffman, the man Manchin had named the state's chief environmental regulator, he described the Freedom Industries spill as an unforeseeable accident, and one that would not have been detected by more inspections. "Nobody could see the hole forming in that tank," he said. "So the leak was going to happen." He believes that environmental activists will never be satisfied with his agency. "What am I supposed to do when people know the truth but they deliberately manipulate it in order to make their point? That's being an activist." He added, "We're not perfect, but we're not evil."

In West Virginia, as in most states, many pollution standards are set by elected officials, and they have shown a consistent approach in recent years. Attorney General Patrick Morrisey, who in 2012 was the first Republican to win the post since 1933, campaigned on a promise to "restrain Washington's appetite for spending, regulations, and mandates." To promote business, he backed a lawsuit against the Environmental Protection Agency, saying, "At its essence, this lawsuit is about jobs in West Virginia and elsewhere."

Evan Hansen, an environmental consultant who has testified about the leak before the West Virginia legislature, has tracked the cumulative effect of that objective throughout the government. "In the past ten or fifteen years, they've systematically weakened virtually all the major water-quality standards that apply to the coal industry," he said. "One by one, there's been a steady effort to undermine the implementation of environmental laws, to the point that it's become a part of everyday normal life here."

But the Freedom Industries spill exceeded the public's capacity for tolerance. Governor Tomblin announced that his office would propose legislation—the "spill bill," as it was known—to govern aboveground storage tanks of the kind that leaked at Freedom Industries. To understand who had a hand in creating the bill, Ken Ward, Jr., of the *Gazette*, filed a Freedom of Information Act request for communications between the Governor's office and lobbyists and lawyers connected to the chemical and coal industries. He received a hundred and fifty-eight pages of e-mails and documents. They revealed that the Governor's office had arranged a closed-door meeting for what it called "the stakeholders," which included the Chamber of Commerce, the Oil and Gas Association, and the Coal Association. No citizens' groups or environmental organizations were invited.

Later, industry groups sent detailed notes on the bill. Rebecca Randolph, the president of the West Virginia Manufacturers Association, which lobbies on behalf of the chemical industry, proposed eighteen exemptions to the law that would "address some of our concerns." Eventually, when lawmakers held a hearing to review the bill, regulators were unable to justify some of the exemptions. "They didn't have any idea why things were in there," Ward said. "It's so ingrained in the way the legislature works that most of the people that cover the State House are kind of immune to how outrageous that is."

Over the years, Ward had witnessed other demonstrations of the coal industry's penetration of

state government. He once received a copy of a script that lobbyists had written to help a legislator introduce a rule change on water pollution. It read, in part, "We must be sure that our standards are protective of our streams without being overly protective." In the most brazen example, ten years ago, Don Blankenship, the chairman of Massey Energy, which was America's fourth-largest coal company, sought to reshape the politics of the West Virginia Supreme Court shortly before it took up Massey's appeal of a fifty-million-dollar judgment for fraud and interfering with a contract. Blankenship had broken the mine workers' union during a strike in 1985 and still kept, near his desk, a television that had been shattered by a bullet that came through his office window. Judges in West Virginia are elected, not appointed, and in 2004 Blankenship spent more than three million dollars to promote a conservative candidate named Brent Benjamin, who was vying to be the first Republican on the Supreme Court in seventy-six years. Most of the money went to a political-action committee that was running ads accusing Justice Warren McGraw, a progressive, of being soft on child molestation and drugs. Blankenship's candidate won, and provided the decisive vote that overturned the judgment against Blankenship's company. The U.S. Supreme Court eventually said that Benjamin should have recused himself from the case, on the ground that Blankenship had a "disproportionate influence in placing the judge on the case."

In West Virginia, members of the Senate and the House of Delegates meet at the beginning of each year for sixty days, before returning to regular life. The legislature is so sparsely funded that, until 1993, committees had no permanent legal staff, so they brought in lawyers as consultants, many of whom represented local industries. West Virginia's public salaries are among the lowest in the country, so senior government employees often pass through the revolving door into the industries they regulate, a tendency that reinforces the youth and inexperience of the government staff left behind.

The West Virginia legislature has proved vulnerable to the forces of outside influence. In the nineteen-eighties, coal companies converted part of the top floor of a hotel into a Coal Suite, where lawmakers could enjoy an open bar, a buffet, card tables, and private areas. In 1989, after two successive presidents of the state Senate were charged with taking money from lobbyists, the state passed a Governmental Ethics Act, which limits gifts and forces legislators to report on their finances. Today, the Coal Suite is gone, but, unlike in a majority of states, West Virginia industry groups and their clients don't have to report how much they spend. In 2010, the Pacific Research Institute compared state laws on transparency in politics—the requirement, for instance, that a lobbyist disclose its spending on behalf of a client. West Virginia tied with Nevada as the least transparent in America.

The Democrat John Unger, a pastor and former Rhodes Scholar who serves as the majority leader in the state Senate, told me that he has identified three steps by which lobbyists win the coöperation of his peers. "First, they try to wine and dine you. Then they try to set you up. And then they try to threaten you."

Set you up? I asked.

"Set you up in the sense of getting something on you so that you become beholden to them," he said. "Back when I was a freshman, I stayed at the Marriott during the legislative session. And

they would send people up to your room and knock on the door." He continued, "When I looked out the peephole and saw who it was, I'd call down to security and say, 'Someone's lost, they're knocking on my door.' Then I moved out."

Unger recalled the first time that a lobbyist for a chemical company asked him to vote on a bill. "I said, 'I don't sign on to anything until I read it.' And he said, 'Well, that's not the way it works around here.' I said, 'Well, I don't know how it works down here, but that's the way I work.' And he said, 'Well, if you don't learn to get along, when it comes to your reëlection, we'll stick a fork in you.' And I looked at him and said, 'Sir, with no due disrespect to you, but you weren't for me when I got elected, and I got elected!'

For those who are uncoöperative, the results can be swift. In 2012, a coal-industry lobbyist asked Larry Barker, who was the chair of the House Energy, Industry, and Labor Committee, to advance an industry-backed bill out of his committee. Barker declined, and the meeting adjourned. Afterward, Barker told me, a lobbyist "walks over and crowded me with his shoulder, kind of back to the corner, where there was nobody there but me and him. And I'm looking up at him, and I said, 'What is it?' And he said, 'What's it going to take for you to run our bill?' And I said, 'I want to look it over. I want to let the attorney look at it, I want the union to look it over.' He said, 'This is the last meeting. You can call a special meeting and put this bill on there.' And I said, 'Well, now, why do you think I would do that?' He said, 'Because we want it.' We, meaning the coal industry. 'We want it. Period.' I said, 'Well, we've reached a deadline. If I'm still here next year in this same position, if this is a good bill, I promise you I'll run it in the first meeting next year.' He looked me in the eye and he said, 'That will be too late for you.' And he turned and walked out, and I never heard from anybody else in the coal companies after that."

That fall, a first-time candidate backed by the coal industry challenged Barker and defeated him.

As the role of coal in the economy continues to shrink, the industry has become more organized politically. Last year, it encouraged members of the West Virginia legislature to form a Coal Caucus, which has since attracted more than a third of the House. "In my seven years of service in the legislature, I've never seen the industry represented as effectively and efficiently as it is this session," the Republican delegate Troy Andes told a convention last year. When I arranged an interview with one of the Coal Caucus's most dedicated members, the delegate Rupert Phillips, Jr., of Logan County, he arrived accompanied by Chris Hamilton, a coal-industry lobbyist. They asked to do the interview as a team. Hamilton, in pinstripes and tasselled loafers, is a constant presence in the State Capitol, where he sees himself as an educator for lawmakers who shouldn't be faulted for not knowing "the difference between a dragline and a drag queen."

Phillips makes his living selling mining equipment to coal operators, and after he was elected, in 2010, he ordered license plates for his S.U.V. that say "COALDEL"—for "coal delegate." I asked him if he expected the chemical spill to lead to stricter regulation. "The environmentalists want to blame the coal industry," he said, but he believed that the dangers posed by MCHM had been overstated. When he has handled it in the past, he said, "I've rinsed my hands off and go eat a sandwich!" He suggested I look at a study of the chemical's effects on aquatic life. "I was told that they used some type of little microorganism, or whatever they test. Supposedly, they put an extra amount of this chemical in there, and it never killed the deal. . . . A live fish in a tank, and it's still living! But they don't release all that, the environmentalists. They don't want the truth.

It's fiction."

Hamilton said it's a common misconception that his industry can "run roughshod over environmental concerns, and its general citizenry." On the contrary, he said, "I think you will find the most credible, upstanding people running our regulatory programs, who truly care, who want to see business, at the end of the day, compete in domestic and world markets, but have the utmost respect and sensitivities to personal safety, environmental quality."

Phillips added his compliments to the state's chief environmental regulator: "Randy Huffman does an excellent job."

Hamilton praised elected officials for staying loyal to coal. "From my perspective, there's been a growing maturity within those elected to public office," he said. "We have a strong core of conservative Democrats, with some very knowledgeable and seasoned members of the Republican Party as well. And I think there's a realization that coal always has been, and hopefully will continue to be, a major industry in the state."

To encourage the spread of that view, the industry, in 2002, created Friends of Coal, a nonprofit public-advocacy group intended to "educate West Virginia citizens about the coal industry and its vital role in the state's future." It runs television and radio ads, and for several years it sponsored a Friends of Coal Bowl, to appeal to college football fans. It signed up the former head coaches of the state's favorite athletic teams, Marshall University and West Virginia University, to serve as spokesmen. For children, the Friends of Coal Ladies Auxiliary runs a program called Coal in the Classroom, and produced a workbook entitled "Let's Learn About Coal." For a lesson on economics, the book featured a cartoon character of a smiling lump of coal with arms and legs, holding open the door to a bank.

Because West Virginia has a population of only 1.8 million—less than the city of Houston—an investment in influence goes far. The conservative fossil-fuel magnates Charles and David Koch, through their charitable foundations, have devoted particular attention to the state. The Investigative Reporting Workshop, at American University, found that, between 2007 and 2011, the Kochs gave \$30.5 million to two hundred and twenty-one universities; West Virginia University received nine hundred and sixty-five thousand dollars, the third-highest amount, behind George Mason and Florida State. In February, the university announced that it was creating a five-million-dollar Center for Free Enterprise, funded in part by the Charles G. Koch Foundation.

The Kochs also helped fund research at the Public Policy Foundation of West Virginia, a think tank that, in 2007, published "Unleashing Capitalism: Why Prosperity Stops at the West Virginia Border and How to Fix It," edited by a West Virginia University economics professor named Russell Sobel. The book argued against mine-safety regulations, on the ground that "improved safety conditions result in lower money wages for workers," and asked, "Are workers really better off being safer but making less income?" It also called for relaxing rules on water usage. "Although they are intended to benefit citizens, water use regulations will only hamper prosperity by impeding the state's ability to retain and attract businesses and to generate new employment opportunities." Governor Manchin invited Sobel to brief his cabinet, as well as a

joint session of the Senate and the House Finance Committees. The state Republican Party chairman said, "Unleashing capitalism will be our party platform." In February, Americans for Prosperity, the political-advocacy group funded heavily by the Koch brothers, established a chapter in West Virginia. A state Republican consultant told me, "You can do things here incredibly, incredibly cheaply. For instance, A.F.P., the Koch brothers, went and did North Carolina last time. Well, a legislative seat here is about one-fourth the size of a legislative seat in North Carolina. So there's bang for your buck." In any given district, he said, "You can go in for twenty grand, and probably fix a problem." He also noted, "People are just showing up with pockets full of money, saying, 'We want to help you out.'"

Six weeks after the Freedom Industries spill, the National Guard and the news trucks were gone. In Charleston, people told me that their ordeal had received less national coverage than the latest virus on a cruise liner. "If this were three hundred thousand people in northern Virginia, I think the President would've been here," Ken Ward, the *Gazette* reporter, told me. "Or, at least, Biden." Restaurants in Charleston still advertised that they were using only bottled water. In a stab at levity, Electric 102.7 was playing a country song about what it called the "Aquapocalypse." ("I smell freedom in my shower. I smell freedom in my sink. I will shower in my freedom, but my freedom I won't drink.") In a Facebook post, Victor Urecki, a Charleston rabbi, wrote, "I am ready to be the rabbi that turned wine to water."

Josh and Candi Shriver were down to a quarter of their pallet of bottled water. They were using tap water to bathe, but it was giving Freddie, age three, a rash. At thirty, Candi was slender, with red hair and delicate features; her eyes were rimmed red from exhaustion. The house was carefully decorated—wine corks in a shadow box, inspirational quotes on small wooden plaques—but it was cluttered with jugs of water and other detritus of life after the spill. In February, the Shrivers decided to test their pipes, and Andrea Varrato, an environmental scientist for a consultancy called Downstream Strategies, arrived at the front door with a set of amberglass bottles to collect samples. The test covered cold water, but Candi wanted to test the hot as well. She asked, "It would be six hundred and some dollars per test?" Varrato nodded.

"Holy smokes," Candi said.

Josh looked at her and said, "It's up to you."

She thought for a moment, and said, "I just don't know that we can do twelve hundred dollars." The experience was making her angry. "I don't think that my three-year-old should have to worry about coming in contact with water," she said.

While Varrato collected samples from a pipe in the garage, I asked the Shrivers if they thought that the spill should lead to stricter regulation. Josh had misgivings. "If you regulate it more, and it cuts into coal, then it's ultimately going to force the coal companies to shut down, or they'd have to shut down because they can't compete with the rest of the country's prices," he said. "So regulating it might create benefits up front, but in the end it's going to cause harm."

Candi agreed. "We're a coal state," she said. The spill "doesn't change my view on coal companies. It changes my view on chemical companies who don't house chemicals correctly.

And it also changed our view on the D.E.P., because we thought there were stricter things in place for that."

Candi had begun to imagine a dark future. She wondered if leukemia and other cancers might increase. I asked if they considered moving away. Josh said, "I have a number of people that have put their houses up for sale in an attempt to see if anybody'll actually buy. But one of them said, 'Nobody's going to want to buy here now.'

Candi said, "I would love to move out of this area, to Tucker County. There are no plants up there. If we had the money just to pick up and move . . ." She trailed off. They had too many ties to family and work to imagine leaving.

Others were running out of patience. One morning in late February, Senator Manchin was in Fayetteville, an hour from Charleston, for an event called Coffee and Common Sense, at a café in a converted church. Manchin, who stands six feet three inches and went to West Virginia University on a football scholarship, is an affable, drawling figure in his sixties with a thick brush of gray hair.

The café was packed. When it was time for questions, Alan Jennings, the operations manager at a wilderness outfitter, said that many people in town were worried about a local plant that held wastewater from a natural-gas drilling operation. "It makes you feel like you're not going to know you're in danger until you die," Jennings said. "They have a holding pond there that's not safe." Next, John Raney, a retired NASA engineer, who was wearing a nylon aviator jacket, said, "I want my children and grandchildren to be able to take a shower and not feel that they're going to start lighting up." Manchin promised to help everyone speak to the Department of Environmental Protection. But Stephanie Danz, a local glassmaker, said that state regulators had recorded their complaints repeatedly in the past five years. "It's the same thing over and over and over again," she said. "There are never any results."

A man who was younger and brawnier than others in the room stood and unfolded a piece of paper. He was in his early forties, and worked on a gas rig in Pennsylvania. I expected to hear a voice on behalf of the industry, but he said, "Senator Manchin, if you are truly interested in stopping the environmental and human disaster occurring in West Virginia, you will help craft legislation that will hold accountable those in charge." He went on, "The West Virginia D.E.P. simply has no teeth. If state troopers walked out and arrested the C.E.O. of Freedom Industries, their friends would surely decide to take better care of their facilities." Reading from his statement, he said, "We're small folks and we'll never attend black-tie, thousand-dollar-a-plate fund-raising galas in Manhattan, but we demand justice. We, the people, demand justice!" The room broke into applause. The man sat down and did not speak again. (He requested that I not use his name, for fear of losing his job.)

After everyone went home, I asked Manchin if the spill had led him to adjust his sense of the balance between environmental protection and business promotion. "My balance is always in the same place," he said, and smiled. "I don't want my inspectors going out with a cease-and-desist order. Why shouldn't they come out and say, 'Let me just show you what you're doing wrong. And this is what we've got to do to clean this mess up.' Fine. If they come back next month and

you've ignored it, we'll slap a cease and desist and put you out of business." When I pointed out that citizens did not seem impressed by the state's enforcement, Manchin said, "If someone is saying that someone has sold out to business over enforcing government, that is so false. I have never seen that."

In Congress, Manchin is the only Democrat among the top twenty recipients of campaign money from the mining industry. In the four years since he ran for the Senate, the industry has given him more than six hundred and sixty thousand dollars, according to the Center for Responsive Politics. Three of his top five donors are energy companies. I asked him if his personal income and his campaign donations make it difficult for him to render an unbiased opinion. "It does not affect my decision-making to do the right thing," he said. "Do you think that I live hand-to-mouth? No, I don't. I don't. And the bottom line is, I haven't brokered coal for a long time. We do a lot of different things. But the bottom line is this: I still believe wholeheartedly you can do it"—coal mining—"and do it right."

In 1960, John F. Kennedy won the West Virginia Democratic Presidential primary by campaigning with the help of F.D.R.'s son, Franklin, Jr., and promising to introduce an aid program for West Virginia within sixty days of taking office. In the following years, the poverty of Appalachia startled a generation that had come to believe in its ability to reshape the world, and the question is whether the current political age, which is hostile to government action on poverty and the environment, and insistent on the doctrine of self-correction, can muster a meaningful response. The last time I saw Majority Leader Unger, he said, "Martin Luther King said that injustice anywhere is a threat to justice everywhere. Why should anybody care about what goes on in West Virginia? Because it's the canary in the mine shaft. If you ignore it in West Virginia, it's coming, it's going to continue to build, and the issue is: Should our country have the debate about our rights to the very basic infrastructure that sustains us? Or should we continue to ignore it?"

In early March, the legislature passed the spill bill. It was better than many had expected, in that it removed a lot of the exemptions proposed by the industries, though they could be reinserted in the details of enforcement. Unger was the lead sponsor of the bill, and now he was bracing for an effort to unseat him. "I have an opponent that jumped into the race after I started coming forward on water issues," he said. "I'm sure he'll be well funded in the fall. I know I'm targeted. I see the red dot on me."

The spill bill did not try to address the deeper issue facing the state: the future of coal. By harnessing the most powerful technologies of political influence—campaign finance, public relations, politicized research—West Virginia's coal industry has recast an economic debate as a cultural debate: a yes-or-no question, all or nothing. Viewed in that light, a vote for the industry is a vote for yourself, your identity, your survival. The coal industry has created the illusion of vitality. (Once, at the Shrivers' house, I asked Josh what percentage of the state's workforce is directly employed by coal. He guessed fifteen per cent. I looked it up; the answer is three per cent.)

The arguments for making sacrifices to protect the coal industry will become more difficult to sustain. With the most accessible seams depleted, and West Virginia coal facing competition

from inexpensive natural gas, the U.S. Department of Energy forecasts that by the end of the decade coal production in the region will have dropped by half. In anticipation, the West Virginia Center for Budget and Policy, a progressive think tank, has called for using natural-resources taxes to create a "future fund" that would promote diversification by investing in infrastructure, education, and job-training programs.

But embracing that policy will be difficult as long as bills are written in private, politicians regard polemics as scholarship, and lobbyists can secure the coöperation of lawmakers by any means necessary. Year by year, the West Virginia public is recusing itself from politics. In 1960, more than seventy-five per cent of eligible voters cast ballots—almost fourteen per cent more than the national average. By 2012, West Virginia's turnout had sunk to 46.3 per cent, the second-lowest level in America.

This fall, West Virginia will likely reach a milestone in its political evolution: Senator Rockefeller is retiring, and the strongest candidate to succeed him is Representative Shelley Moore Capito; if she wins in midterm elections, she will be the first Republican senator from West Virginia since 1956. The last remaining Democrat in the state's House delegation, the nineteen-term Representative Nick J. Rahall II, is facing his most difficult campaign yet; Americans for Prosperity has spent at least two hundred and forty thousand dollars on ads linking Rahall to health-care reform, including one featuring the line "Obamacare is hurting West Virginia families."

In 2012, the G.O.P. picked up eleven seats in the West Virginia House; this year, the Party is confident that it can win the four more it needs to claim the first Republican majority since 1932. The Party is running a get-out-the-vote campaign called "Make It Right," and it's encouraging conservative Democratic candidates to switch parties. In Clarksburg, where I used to live, Mike Queen's family has been in local Democratic politics since the fifties. "You wouldn't dare tell my grandfather that you were anything but a Democrat," he said. Queen was elected to the House of Delegates in 1988, served one term, and had a career in business, before entering a race for the state Senate this fall, this time as a Republican. Over lunch, I asked why.

"We've been turned into a poverty-ridden, federal-program-dependent state with no hope," he said. "I'm not saying the Democrats encouraged it. But the Democrats have allowed it to happen, with no planning for how we're going to get out of this hole." He went on, "So you take all those things together, people just got tired of the same old crap."

Before I drove back to Charleston, I stopped by my old apartment building. A first-floor window was boarded up. I looked up at my place, on the third floor; a window was missing its glass, and a bedsheet, draped across the hole, was flapping in the wind. A first-time visitor could have mistaken Clarksburg for a place that had never caught up, rather than a city that once shared in an American moment of broader prosperity.

In West Virginia's abundant history of disasters, the Freedom Industries spill was unusual; there are no casualties to count, no floodwaters to fight. It was an accident with no clear ending, and, more than two months later, the most basic question remained unanswered: Is the water safe? A person would need to swallow large quantities of MCHM to approach a lethal dose. When I

asked Dr. Gupta, the head of the health department, if he and his family were drinking from the tap, he said that they were not. The water at their house still had an odor. "It is very difficult to drink licorice-flavored water," he said. I asked if there were any outstanding scientific questions, and he laughed. Then he said, "What is the metabolism and excretion of this compound in humans? Does it accumulate? Where does it accumulate? What is the carcinogenic potential? What is the teratogenic potential? What does it do to home pipes? How does it interact, if at all, with other compounds in water, such as chlorine? Does it form harmful or harmless products?"

Dr. Gupta ran though another half-dozen medical and scientific issues, and arrived at the question that concerns him most. For a man who had left a country that had undergone radical divides in human development, the causes and effects of the Freedom Industries spill feel like a departure from an American principle he thought he understood. He said, "The 1974 Safe Drinking Water Act allows every resident of the United States to have access to safe drinking water. So how do we say that, for three hundred thousand people in this part of West Virginia, it's O.K. to have 'appropriate' water? Do we understand the path we're taking here, by defining two different classes of water, for two different groups of population? Do we really want to go down that path? In the history of this nation, it doesn't end well when we go down this path." •

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